IFW



Docket No.: 13111-00027-US

(PATENT)

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Silvia Glück et al.

Application No.: 10/560455

Filed: December 14, 2005 Art Unit: N/A

For: METHOD FOR THE MICROBIOLOGICAL

ISOMERISATION OF ALPHA-HYDROXY

CARBOXYLIC ACIDS

Examiner: Not Yet Assigned

Confirmation No.: N/A

### SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (IDS)

MS PCT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A copy of each reference is attached.

This statement is not to be interpreted as a representation that the cited documents are material, that a search has been conducted, or that no other relevant information exists. Nor shall the citation of any document herein be construed *per se* as a representation that such document is

Application No. Not Yet Assigned Amendment dated

First Preliminary Amendment

prior art. Moreover, Applicants understand the Examiner will make an independent evaluation

of the cited documents.

This Information Disclosure Statement is being submitted before the first Office Action on the merits; accordingly, Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13111-00027-US from

Dated: March 23, 2006

which the undersigned is authorized to draw.

Respectfully submitted,

By\_

Hui-Ju Wu

Registration No.: 57,209

CONNOLLY BOVE LODGE & HUTZ LLP

Docket No.: 13111-00027-US

1007 North Orange Street

P.O. Box 2207

Wilmington, Delaware 19899

(302) 658-9141

(302) 658-5614 (Fax)

Agent for Applicants

454540

- 2 -



PTO/SB/92 (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 10/560455

Attorney Docket No.: 13111-00027-US

# Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

on <u>March 23, 2006</u> Date

Signature

Deborah Israel

Typed or printed name of person signing Certificate

(302) 658-9141

Registration Number, if applicable

Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Supplemental Information Disclosure Statement (IDS) (2 pages) IDS (Citation) by Applicant PTO/SB/08a/b (20 References) (2 pages) Copies of References (20 References)

Postcard

Sheet

PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO

1

### INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

of

Complete if Known			
Application Number 10/560455			
Filing Date December 14, 2005			
First Named Inventor Silvia Glück			
Art Unit N/A			
Examiner Name	Not Yet Assigned		
Attorney Docket Number	13111-00027-US		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.1	Document Number  Number-Kind Code <sup>2</sup> ( if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

2

FOREIGN PATENT DOCUMENTS						
Eveniner	Cite	Foreign Patent Document	Publication	Name of Patentee or	Pages, Columns, Lines,	
Examiner Initials*	No.1	Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	T⁵
	ВА	EP-0596466	05-11-1994	Tanabe Seiyaku Co., Ltd.		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	<b>T</b> ²
	CA	Glueck, S. M., et al., "Lactate Racemase As a Versatile Tool for the Racemization of α- Hydroxycarboxylic Acids", Chem. Listy, 2003, Vol. 97, p. 431.	
	СВ	Schnell, B., et al., "Enzymatic Racemisation and its Application to Synthetic Biotransformations", Advanced Synthesis & Catalysis, 2003, Vol. 345, pp. 653-666.	
	СС	Liu, S-Q., "Practical Implications of Lactate and Pyruvate Metabolism by Lactic Acid Bacteria in Food and Beverage Fermentations", International Journal of Food Microbiology, 2003, Vol. 83, pp. 115-131.	
	CD	Strauss. U.T., et al., "Deracemization of (±)-Mandelic Acid Using a Lipase-Mandelate Racemase Two-enzyme System", Tetrahedron: Asymmetry, 1999, Vol. 10, pp. 4079-4081.	
	CE	Felfer, U., et al., "Substrate Spectrum of Mandelate Racemase Part 2. (Hetero)-Aryl-Substituted Mandelate Derivatives and Modulation of Activity", Journal of Molecular Catalysis B: Enzymatic, 2001, Vol. 15, pp. 213-222.	
	CF	Schafer, S.L., et al., "Mechanism of the Reaction Catalyzed by Mandelate Racemase: Structure and Mechanistic Properties of the D270N Mutant", Biochemistry, 1996, Vol. 35, pp. 5662-5669.	
	CG	Garcia-Viloca, M., et al., "A QM/MM Study of the Racemization of Vinylglycolate Catalyzed by Mandelate Racemase Enzyme", Journal of the American Chemical Society, 2001, Vol. 123, pp. 709-721.	
	СН	Li, R., et al., "Racemization of Vinylglycolate Catalyzed by Mandelate Racemase", Journal of Organic Chemistry, 1995, Vol. 60, pp. 3347-3351.	
	CI	Kenyon, G.L., et al., "Mandelate Racemase: Structure – Function Studies of a Pseudosymmetric Enzyme", Acc. Chem. Res., 1995, Vol. 28, pp. 178-186.	
	Cl	Pearson, W.R., et al., "Improved Tools for Biological Sequence Comparison", Proc. Natl. Acad. Sci. USA, 1988, Vol. 85, pp. 2444-2448.	
	СК	Narang, S.A., "DNA Synthesis", Tetrahedron, 1983, Vol. 39, No. 1, pp. 3-22.	
-	CL	Itakura, K., et al., "Synthesis and Use of Synthetic Oligonucleotides", Ann. Rev. Biochem., 1984, Vol. 53, pp. 323-356.	
	СМ	Itakura, K., et al., "Expression in Escherichia coli of a Chemically Synthesized Gene for the	

Examiner	 Date	
Signature	Considered	

MAR 9. 7 2006 Under the Paper TRADENT TRADENT 1449A/B/PTO

PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

2 2 Sheet of

Complete if Known			
Application Number 10/560455			
Filing Date December 14, 2005			
First Named Inventor Silvia Glück			
Art Unit	N/A		
Examiner Name	Not Yet Assigned		
Attorney Docket Number	umber 13111-00027-US		

	Hormone Somatostatin, 1977, Vol. 198, pp. 1056-1063.
CN	Ike, Y., et al., "Solid Phase Synthesis of Polynucleotides. VIII. Synthesis of Mixed Oligodeoxyribonucleotides by the Phosphotriester Solid Phase Method", Nucleic Acids Research, 1983, Vol. 11, No. 2, pp. 477-488.
СО	Arkin, A.P., et al., "An Algorithm for Protein Engineering: Simulations of Recursive Ensemble Mutagenesis", Proc. Natl. Acad. Sci. USA, 1992, Vol. 89, pp. 7811-7815.
СР	Delagrave, S., et al., "Recursive Ensemble Mutagenesis", Protein Engineering, 1993, Vol. 6, No. 3, pp. 327-331.
CQ	Thomas, K.R., et al., "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells", Cell, 1987, Vol. 51, pp. 503-512.
CR	Ebbers, E.J., et al., "Controlled Racemization of Optically Active Organic Compounds: Prospects for Asymmetric Transformation", <i>Tetrahedron</i> , 1997, Vol. 53, No. 28, pp. 9417-9476.
CS	van Rantwijk, F., et al., "Lipase-Catalyzed Synthesis of Carboxylic Amides: Nitrogen Nucleophiles as Acyl Acceptor", Monatshefte für Chemie, 2000, Vol. 131, pp. 549-569.

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner	 Date	
Signature	 Considered	<u> </u>

<sup>&</sup>lt;sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.